



U.S. Department
of Transportation
**Research and
Special Programs
Administration**

400 Seventh St., S.W.
Washington, D.C. 20590

**IAEA CERTIFICATE OF COMPETENT AUTHORITY
SPECIAL FORM RADIOACTIVE MATERIALS
CERTIFICATE NUMBER USA/0497/S, REVISION 2**

This certifies that the source described has been demonstrated to meet the regulatory requirements for special form radioactive material as prescribed in the regulations of the International Atomic Energy Agency¹ and the United States of America² for the transport of radioactive materials.

1. Source Identification - AEA Technology QSA, Inc. Model X.444.
2. Source Description - Cylindrical single or double encapsulation made of Type 316 or 316L stainless steel and tungsten inert gas seal welded. Approximate maximum exterior dimensions are 5.6 mm (0.22 in.) in diameter and 15.0 mm (0.59 in.) in length. Minimum wall thickness is 0.63 mm (0.025 in.). Any inner encapsulation shall be made of stainless steel, aluminum, or titanium. Construction shall be in accordance with attached Sentinel Drawing No. R 87522, Rev. A.
3. Radioactive Contents - No more than 10.92 TBq (295.0 Ci) Iridium-192 or Cobalt-60 in solid metal form.
4. Quality Assurance - Records of Quality Assurance activities required by Paragraph 310 of the IAEA regulations¹ shall be maintained and made available to the authorized officials for at least three years after the last shipment authorized by this certificate. Consignors and consignees in the United States exporting or importing shipments under this certificate shall satisfy the requirements of Subpart H of 10 CFR 71.
5. Expiration Date - This certificate expires September 30, 2008. On December 31, 2003, this certificate supersedes, in its entirety, all previously issued revisions of USA/0497/S.

1 "Regulations for the Safe Transport of Radioactive Material, 1996 Edition (Revised), No. TS-R-1 (ST-1, Revised)," published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

2 Title 49, Code of Federal Regulations, Parts 100 - 199, United States of America.

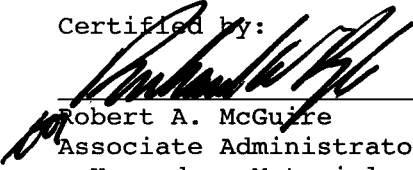
(- 2 -)

CERTIFICATE USA/0497/S, REVISION 2

This certificate is issued in accordance with paragraph 804 of the IAEA Regulations and Section 173.476 of Title 49 of the Code of Federal Regulations, in response to the petition and information dated August 18, 2003 submitted by AEA Technology QSA, Inc., Burlington, MA, and in consideration of other information on file in this Office.

Certified by:

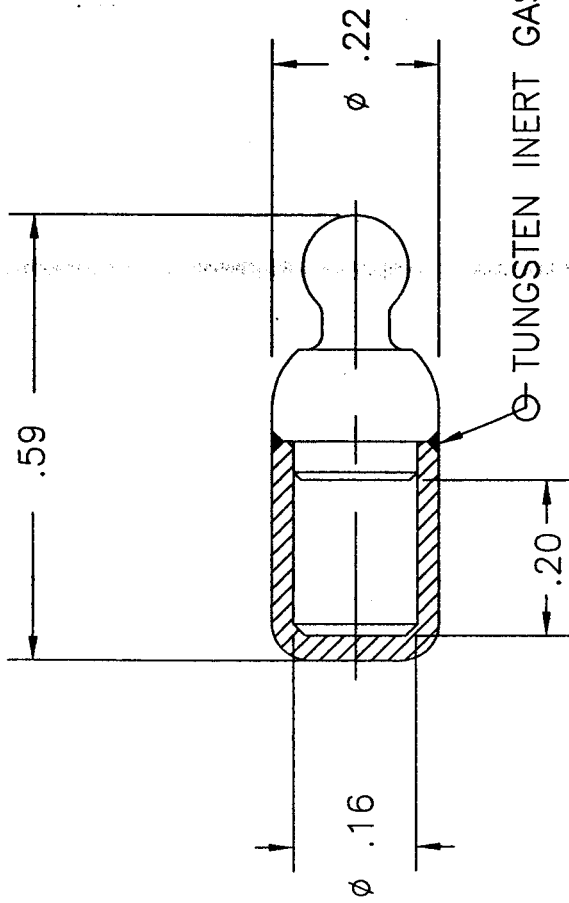
AUG 29 2003



Robert A. McGuire
Associate Administrator for
Hazardous Materials Safety

(DATE)

Revision 2 - Issued to update to 1996 TS-R-1 Revision and current corporate name.



NOTES:

1. INTERNAL VOID TO BE 0.010 mL OR GREATER.
2. MATERIAL: 316L STAINLESS STEEL OR EQUIVALENT.
3. INNER CAVITY DIMENSIONS MAY VARY. METALLIC SPACERS, SPRINGS AND GUARDS WHICH SECURE AND/OR LOCATE THE RADIOACTIVE MATERIAL WITHIN THE CAPSULE MAY BE USED.
4. MINIMUM WALL THICKNESS TO BE 0.025.

UNLESS OTHERWISE SPECIFIED:

ALL DIMENSIONS ARE INCHES AND REFERENCE

SENTINEL™

DESCRIPTIVE
DRAWING

Amersham Corporation
40 NORTH AVE. BURLINGTON, MA 01803

TITLE

X444 CAPSULE ASSEMBLY

SIZE

DWG. NO.

R 87522

REV

A

SCALE: NONE

SHEET 1 OF 1

INITIAL RELEASE

DESCRIPTION

REVISIONS

21/02/95

A

21/02/95

DATE

LTR

APPROVALS

S. Gami

21/02/95